

## REMARKS

Claims 4, 6, 12 and 13 are pending in the application. With this amendment claims 4, 6 and 13 have been amended in order to further define the invention. New claim 19 has been added to further define the invention as set forth on page 4, second and third full paragraph. Original claims 4 and 6 of the German language document utilized the term "Lamellen" that was translated into English as the word "sheets". However, it is believed that a better translation of the word is "lamella" or "lamellae" which are generally thin layers. In accordance with the support defined above, the lamellae have been further defined as being liquid or gel lamellae. As such, the claims have been amended and no new matter has been added.

Regarding the drawings, the Examiner states that Fig. 1a utilizes what appears to be the letter "m" that is not defined in the specification, but it is believed that the same refers to number 11. The Examiner's objection has been noted and the drawings have been amended to provide typed reference numbers. Additionally, the Examiner notes that no numeral 13 is present in Fig. 4 although the same is defined in the specification. Fig. 4 has been amended to add numeral 13 referring to one of the phases. Page 10 has been further amended to define the electrodes 6a and 6b present in Fig. 5. Moreover, the recitation of Fig. 8a has been amended to refer to Fig. 7a which contains the biochip 1'. In view of the amendments, it is respectfully submitted that the drawing objections have been overcome.

All pending claims have been rejected under 35 U.S.C. § 112, second paragraph, as the Examiner states that in the case of a liquid, it is not clear, given the properties of the liquids, how multiple sheets of liquid will remain separate when placed against each other as the basic nature of a liquid is to "immerse".

It is respectfully submitted that the claims are definite and many different compositions of two or more liquids are present in two or more different phases. One particular example is the utilization of two liquid phases with different densities, e.g. oil and water, see for example second full paragraph on page 4 of the substitute specification. Additionally, the first full paragraph of page 9 mentions aqueous and nonaqueous phases. The second paragraph on page 9 mentions two non-miscible aqueous solutions. The third paragraph on page 9 mentions polar and non-polar fluids

whereby particles therein would be separated according to their hydrophobicity. Many other non-miscible food combinations are known to those of ordinary skill in the art.

Claims 4, 6, 12 and 13 have been rejected under 35 U.S.C. § 103(a) over Dantsker et al, U.S. Publication 2002/0153046 in view of Manach et al., U.S. Publication 2004/0104173.

It is respectfully submitted that the cited references cannot render the invention set forth in independent claim 1 obvious. Dantsker discloses a microfluidic device consisting of several layers that are arranged on top of each other. These layers have either channels, for example 17, 18, 19 or ports 16, 18, 22. A fluid supplied to the device is split into different flow streams. Dantsker discloses passive control of fluid flow through the microfluidic conduits so that electric fields are not necessary. As such the scope and content of Dantsker does not include any discussion of supplying an electric field to a microfluidic system.

The Manach reference relates to the field of separating constituents of complex samples by chromatography, see paragraph [0001]. The examiner states Manach specifically teaches that in an electrochromatic device, electric fields can be applied in either parallel or perpendicular in paragraph [0074].

However, as described in paragraph [0044] of Manach, separator module 7 is implemented in the form of a chamber 17 adapted to receive at least one layer forming the flat separation column 3, which layer defines one or two stationary phases. this layer known as a "sorbent" may be constituted by a powder or particles or based on organic components such as cellulose, synthetic resin, polyamide or mixtures of said components that is deposited on a support plate. Paragraph [0074] states that an electrophoresis can take place either simultaneously or sequentially with respect to moving phase separation.

That said, Manach provides no scope and content for applying an electric field to a microfluid system consisting of a plurality of liquid or gel lamellae of two or more different phases.

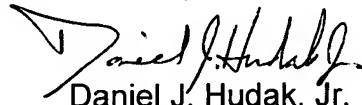
Accordingly, it is unclear how one of ordinary skill in the art would be led to arrive at the invention set forth in independent claim 4 in view of the teachings of the Dantsker and Manach references, as neither reference teaches applying an electric field to a microfluid system consisting of a plurality of adjoining liquid or gel lamellae in two or

more different phases. it is respectfully submitted that the current rejection cannot stand.

Should the Examiner have any questions or concerns regarding this response, a telephone call to the undersigned is greatly appreciated.

Respectfully submitted,

HUDAK, SHUNK & FARINE CO. LPA

A handwritten signature in black ink, appearing to read "Daniel J. Hudak, Jr.", written over the printed name.

Daniel J. Hudak, Jr.  
Registration No. 47,669

DJHjr/ljg/dp  
2020 Front St., Suite 307  
Cuyahoga Falls, OH 44221  
330-535-2220  
Attorney Docket No.: FMW-CP-PCT-US (I 1020 US)